



Disclosure Statement

- Eastern AHEC requires all speakers to disclose any relevant financial conflicts of interest.
 - I am disclosing that I am a stock shareholder with Merck Pharmaceuticals.



Objectives

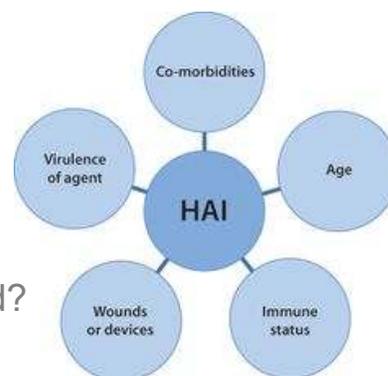
- Define a Healthcare Associated Infection (HAI)
- Identify consequences of unsafe injection practices
- List infection control best practices



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Healthcare Associated Infection (HAI)

- What is it?
- Why is it important to me?
- How can HAI be prevented?



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Diseases of Interest

- Have you seen any of the following in your LTC or other facilities?
 - Cdiff (Clostridium difficile)
 - MDRO's (**M**ulti-**D**rug **R**esistant **O**rganisms)
 - MRSA
 - CRE (Carbapenem-resistant Enterobacteriaceae)
 - GAS (Group A Strep)



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Clostridium difficile

- *Contributing factors:*
 - Older adults
 - Antibiotic use
 - > 50% of hospitalized patients will get an antibiotic during their stay
 - Studies have shown that 30-50% of antibiotics prescribed are unnecessary or incorrect
 - Medical care



https://www.cdc.gov/hai/organisms/cdiff/cdiff_clinicians.html

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C diff Prevention

- Isolate positive patients immediately
- Wear gloves and gowns, even during short visits
- Environmental cleaning

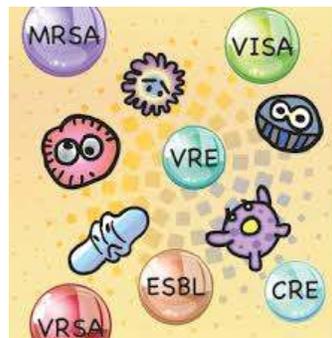


<https://www.cdc.gov/vitalsigns/hai/stoppingcdifficile/index.html>

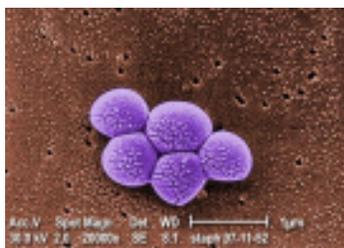


Multi Drug Resistant Organisms

MDRO's - Common bacteria that have developed resistance to multiple types of antibiotics



MRSA



- Most often causes skin infections
- Sometimes causes pneumonia, bloodstream and surgical site infections
- Sepsis may develop if untreated
- Contact with infected wound or sharing personal items



MRSA Prevention:

- Maintain good hand and body hygiene
- Keep cuts, scrapes and wounds clean and covered until healed
- Don't share personal items (e.g. towels, razors)
- Seek care early if signs of infection present

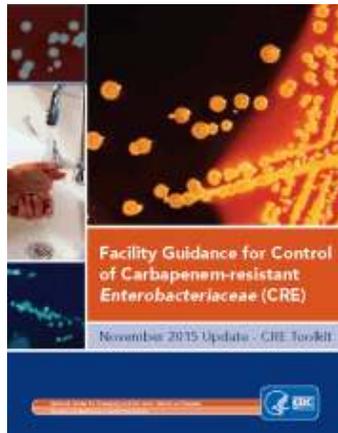
37,000
Preventing infections and improving antibiotic prescribing could save 37,000 lives from drug-resistant infections over 5 years.
[Learn More >>](#)

Vital Signs
www.cdc.gov/vitalsigns/stop-spread



CRE (Carbapenem-resistant Enterobacteriaceae)

- Enterobacteriaceae examples: *Klebsiella* and *Escherichia coli* (*E. coli*)



- Most commonly seen in those exposed to hospitals and long-term care facilities
- **Risks:** Care requiring devices (e.g. ventilators, urinary catheters, or IVs, and those taking long courses of certain antibiotics)



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CRE Facts

- About 4% of US hospitals had at least one patient with a CRE infection during the first half of 2012
- About 18% of long-term acute care hospitals* had one
- CRE infection reported in medical facilities in 42 states
- 1 out of 2 CRE bloodstream infections will die

<https://www.cdc.gov/vitalsigns/hai/cre/index.html>



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CRE Prevention:

- Follow contact precautions
- Follow hand hygiene recommendations
- Dedicate rooms, staff, and equipment to patients with CRE
 - Prescribe antibiotics wisely
 - Remove temporary medical devices (catheters and ventilators) as soon as possible

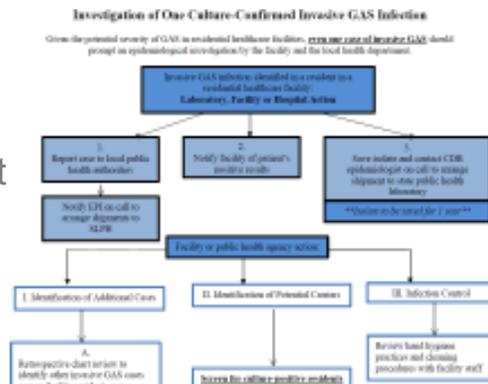


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Group A Strep

Affectionately know as “GAS”

- Investigation steps for single and multiple cases
- Retrospective chart review, 1 month
- Survey health care workers
- 4 months active surveillance



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Reporting GAS

Enter Facility Information Here

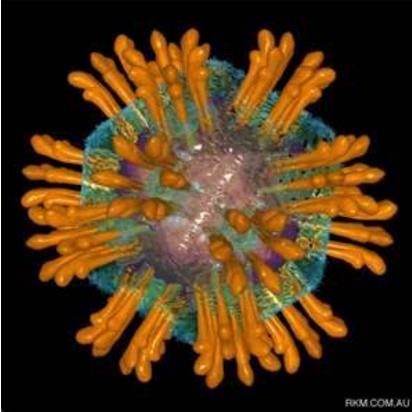
4. Risk History -- Patient Name -- Streptococcal invasive infection, Group A

The patient is (choose most appropriate answer)		Resident of NC	Expand to...
Child Care / School / College			
Is the patient involved in child care or the parent/primary caregiver of a child in child care?	Yes	No	
Is patient a student? (Use Add New for each school)	Yes	No	Add New
Is patient a school WORKER / VOLUNTEER in NC school setting? (Use Add New for each school)	Yes	No	Add New
Behavioral Risk and Congregate Living			
During the period of interest did the patient live in any congregate living facilities (correctional facilities, barracks, shelters, convales, boarding school, camp, dormitory/tenement/flat)?	Yes	No	Add New
In what setting was the patient most likely exposed?	CC_Home		
Health Care Facility and Blood and Body Fluid Exposure Risk			
DURING THE PERIOD OF INTEREST			
During the timeframe displayed above, did the patient have any of the following health care exposures? (Add new for all that apply)	Yes	No	Add New
Health care exposure to blood and body fluids risks			
Other Exposure Information			



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An Old Disease....A New Problem



Hepatitis



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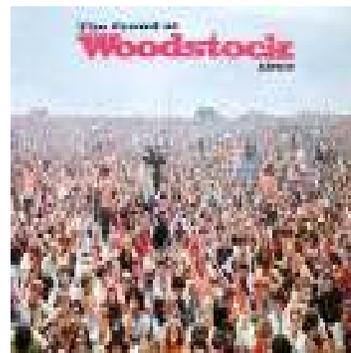
Hepatitis B (HBV)

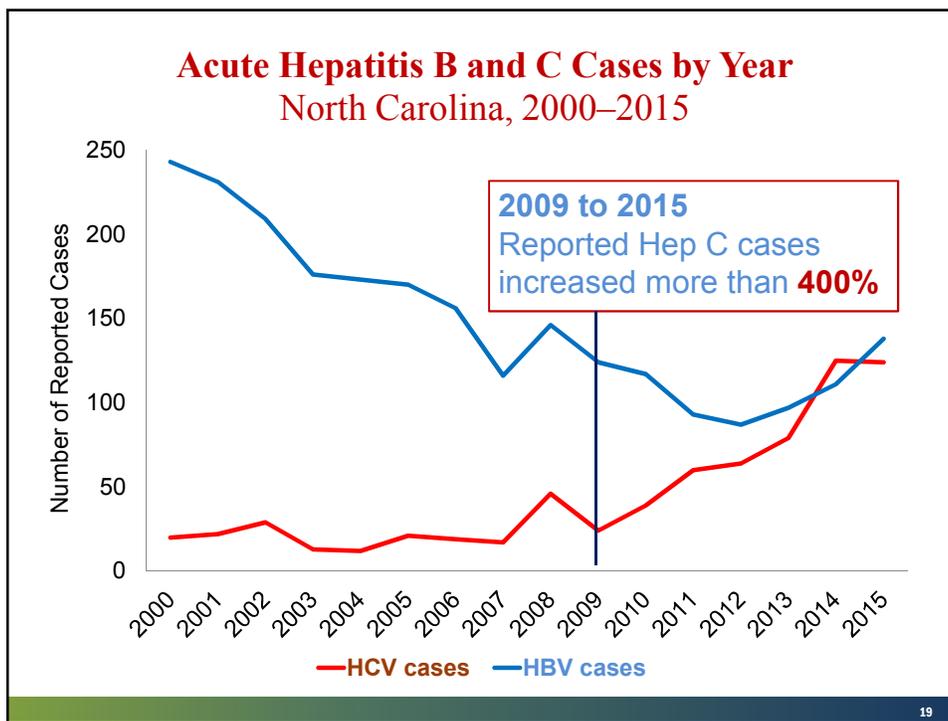
- Sexually and bloodborne transmitted disease
- Can survive outside body up to 7 days
- 850,000–2.2 million persons are estimated to be living with chronic HBV (US)
- VACCINE PREVENTABLE



Baby Boomers and HCV (1945-1965)

- 1 in 33 infected with chronic HCV
- 75% unaware of infection
- 2.7- 3.9 million chronic (US)
- 10 X more infectious than HIV
- Can survive outside body up to **4 days**





Infection Control Starts with YOU

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Infection Control in the LHD

- Are your infection policies up to date?
- Does your policy reflect specifics for the facility and not just general CD?
- Is someone assigned to oversee infection control facility wide?
- Has this individual completed .0206 training?



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We are doing fine!

• Are you sure?

- Do all staff **consistently** wash their hands before **and** after patient contact?
- Do staff **ever** cut corners because it's just easier or they don't know what they don't know?



You may be surprised...



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Indirect Contact Transmission

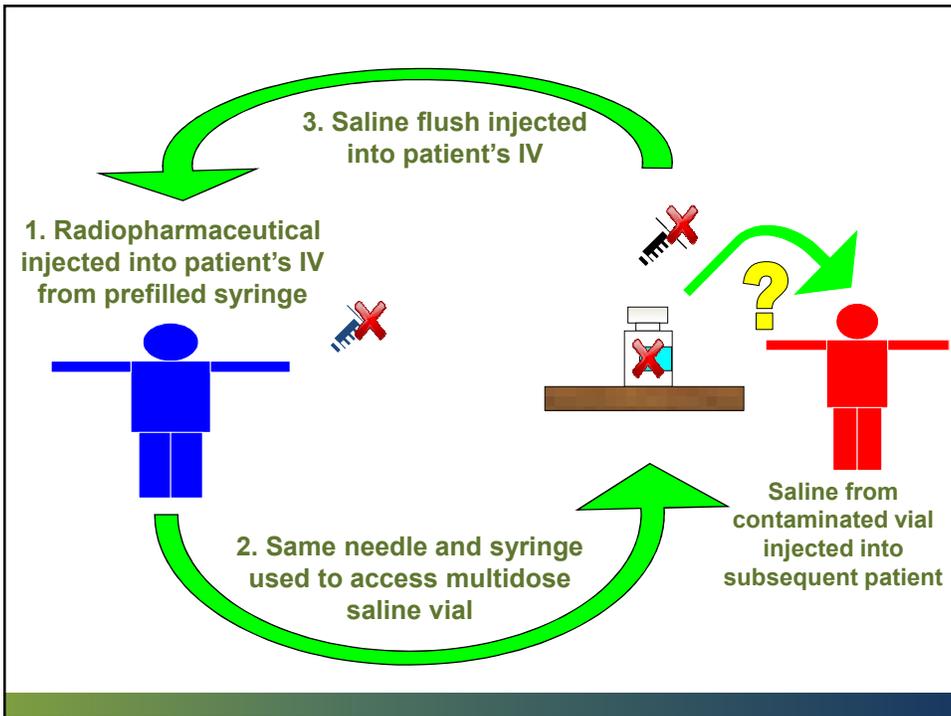
- Transfer of an infectious agent through a contaminated intermediate object or person
 - Hands of healthcare personnel
 - Patient care devices (e.g., glucometers)
 - Instruments (e.g., endoscopes) that are not adequately reprocessed
 - Medications and injection equipment



<http://www.cdc.gov/ncidod/dhqp/pdf/guidelines/Isolation2007.pdf>



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Excuses for Unsafe Practices



- We've always done it this way and we've never had a problem.
- That's not how I trained.
- It's wasteful and expensive; I can't afford it.
- You can't *really* transmit hepatitis that way!

NC

Adapted from E. Lutterloh: Your Best Shot: Training Your Staff to Give Safe Injections

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IC problems?

We Can Help!



Healthcare Infection Control and Response (ICAR) Assessment 

FREE

Opportunity For Nursing Homes, Hospitals, Outpatient Clinics and Dialysis Centers:

- SPICE Nurse Consultant Infection Control Site Visit
- CDC Assessment Tool Reflective of Evidence Based Guidelines
- Site Visit Summary Report with Identified Resolutions
- Educational Opportunities Based on Identified Gap Analysis

A 3-year collaborative between N.C. Department of Public Health (NCDPH) and N.C. Statewide Program for Infection Control and Epidemiology (SPICE) - Funded by CDC, to prepare for and mitigate existing or emerging infectious diseases.

Don't wait for a recruitment call... request a visit from a SPICE Nurse Consultant today!





Request a visit or for more information: <http://spice.unc.edu/ICAR>




DPH is partnering with NC SPICE:

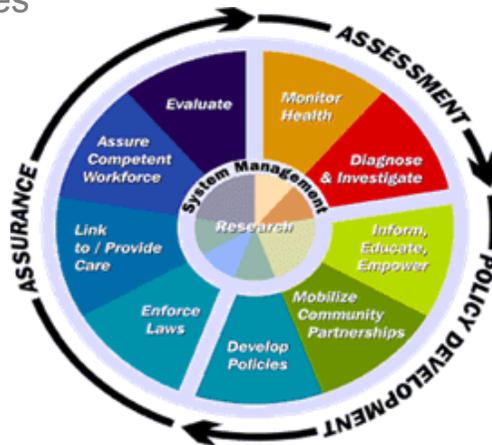
- **FREE** onsite Infection Control Assessment
- DPH is Non-regulatory and Non- punitive
- 3 Certified Infection Control Experts!
- Both informal and formal feedback provided
- Great opportunity for staff education!
- Contact NC SPICE to arrange a visit

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But We Are Accredited!

- Accreditation Focus: assessment, assurance, policy development and the ten essential services



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Major Gaps Identified:

- No competency validation of staff
- Inappropriate transport of contaminated items
- Cross contamination issues (clean to dirty)
- Biologic Indicators not performed per AAMI recommendations
- Chemical Indicators are not utilized
- No sterilization logs
- Expired enzymatic cleaner
- Inadequate hand hygiene



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You are an important part of infection prevention!

Wash your hands with soap and water or use hand sanitizer often. Ask healthcare workers and your visitors to do the same.

Speak up for your care!

Clean your hands and take your antibiotics as directed.

Ask about safe sexual practices. Remember: One Needle, One Syringe, Only One Time.

Wear your gloves and put them into your bin.

Every day, use it you will need your condom.

<http://professionals.site.apic.org>

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Break the Chain of Infection

Links in the Infection Chain:

- Infectious agent
- Reservoir
- Portal of exit
- Mode of transmission
- Portal of entry
- Susceptible host

BREAK THE CHAIN!

- ✓ Immunizations
- ✓ Treatment of underlying disease
- ✓ Health insurance
- ✓ Patient education

BREAK THE CHAIN!

- ✓ Diagnosis and treatment
- ✓ Antimicrobial stewardship

BREAK THE CHAIN!

- ✓ Cleaning, disinfection, sterilization
- ✓ Infection prevention policies
- ✓ Pest control

BREAK THE CHAIN!

- ✓ Hand hygiene
- ✓ Personal protective equipment
- ✓ Personal hygiene
- ✓ First aid
- ✓ Removal of catheters and tubes

BREAK THE CHAIN!

- ✓ Hand hygiene
- ✓ Personal protective equipment
- ✓ Food safety
- ✓ Cleaning, disinfection, sterilization
- ✓ Isolation

BREAK THE CHAIN!

- ✓ Hand hygiene
- ✓ Personal protective equipment
- ✓ Control of aerosols and splatter
- ✓ Respiratory etiquette
- ✓ Waste disposal

APIC Association for Professionals in Infection Control and Epidemiology

Learn how healthcare professionals can break the chain of infection: www.apic.org/professionals

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Simple Rules for Safe Diabetes Care

- Fingerstick devices
 - Single use **ONLY**
- Multi-dose vials of insulin
 - Assign to single patient
- Blood glucose meters, if shared...
 - **MUST** be manufacturer designated 'multipatient'
 - Clean **AND** Disinfect per manufacturer directions
- Injection equipment
 - Single patient use



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KEEP CALM
AND
PPE

nursetopia.net

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Additional Resources:

- **Antibiotic Stewardship/Resistance:**
 - www.cdc.gov/getsmart/healthcare/index.html
- **Long Term Care:**
 - www.cdc.gov/longtermcare/prevention.html
- **Safe Injection Resources:**
 - www.cdc.gov/injectionsafety/
 - www.OneandOnlyCampaign.org
 - <http://epi.publichealth.nc.gov/cd/diseases/hai.html>
- **Infection Control:**
 - <http://www.apic.org/>
 - <https://www.cdc.gov/hicpac/>



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Thank You!

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